Post defense mission extends to endangered plants

Protecting species required by law

By KIM GILLESPIE
For the Rocket

Protecting endangered species is not something most people would expect an Army installation to be doing — much less doing well — but that is exactly what Redstone Arsenal can claim as one of its accomplishments.

The installation has eight species of animal and plant life that are listed as endangered, threatened or species of concern by federal or state law.

"The protection of these species is mandated by law, and because of that, federal agencies must meet certain guidelines," Danny Dunn, chief of the Natural Resources Division, Directorate of Environment and Safety, said. "But more importantly, creating a balanced ecosystem is something that ultimately benefits everyone."

Both the Alabama cave shrimp and the gray bat are listed as endangered by the federal government. Species federally listed as threatened are the American bald eagle and Price's potato bean. The American alligator is federally listed as threatened due to its similarity of appearance to the endangered American crocodile. State and federal species of concern include the Tuscumbia darter, dwarf trillium, and Harper's umbrella plant. Many factors have contributed to the decline of these species, but human development is probably the biggest threat to all. And surprisingly, it is human development that Army installations are best prepared to deal with.

"Look around Redstone. This land would have been snapped up and turned into a housing subdivisions, shopping centers and parking lots," Gabbie Ehinger, staff ecologist, said. "If it weren't for Redstone being protected as a federal installation, many of these species would not have a natural habitat."

Protecting the species means allowing it to recover. In the case of Price's potato bean, restricting access and monitoring plant growth have provided a successful solution. The vine-like plant was discovered growing near an old, out-of-use storage facility. The buildings were removed and access to the area closed, which had two environmental benefits: protecting the plants and protecting the surrounding environment. "People also wanted to come up here and dump trash," Dunn said.

Photo by Carucha Meuse

PRICE'S POTATO BEAN— Protecting the Price's potato bean plants on Redstone Arsenal has paid off — healthy plants now reach out almost one-half acre from the original discovery area of 100 square feet.

Isolating the Price's potato bean plants has paid off. When the plant was first discovered, it covered about 100 square feet on the side of the road. "Now we've got more than half an acre growing," Dunn said.

Ehinger noted that tracking the plant's progress can be difficult because it dies in the winter and returns each spring. The plants are also being found at increasingly greater distances from the original discovery area — but that's a good sign. The Natural Resources Division also manages the potato bean habitat by carefully maintaining the amount of other vegetation in the area to ensure that other plants do not overtake or choke out the Price's potato bean plants. The plants are not specially marked, however.

"Unfortunately, if you bring attention to the fact that something is endangered, it makes people want to possess it that much more because it is unique," Ehinger said.

A similar situation is found with the Alabama cave shrimp. The caves where the shrimp are located are not disclosed because of fear that curiosity seekers, either seeking the shrimp or exploring the cave, might disturb the habitat.

"People don't mean any harm, but they disturb the natural habitat by moving around it," Dunn said. In the past, natural

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habitats were listed in public records, but these habitat locations are no longer sited on public maps for fear of human curiosity, or worse, vandalism.

The Alabama cave shrimp are also susceptible to ground water contamination, so well monitoring has been added for additional protection. Dunn points out that in the case of the Alabama cave shrimp, outsiders may automatically assume that any ground water contamination would be from the installation, but environmental problems are more widespread than that.

"Much like contamination can spread off an installation, it can also spread into an installation," Dunn said. And that is what leads him to emphasize a "holistic" approach to conservation. "This is not just about the installation, it's about the community — and the planet. Everything we do affects something else," he said.

The holistic approach could also be described as proactive. Dunn cites several partnerships with organizations in the community that benefit both the installation and surrounding area, including the Flint River Conversation Association, which performs cleanups on local waterways, and the annual Madison County Drinking Water Festival conducted at the University of Alabama in Huntsville.

"We at Redstone were one of the first installations to begin partnering with other federal and state agencies and local environmental groups and interested individuals to help protect and manage endangered species that live off the installation. The more secure the entire population, the better off we are in being able to integrate future mission activities with endangered species management," he said.

Another environmental initiative implemented at Redstone, and at many other Army installations, is the use of native plants in landscaping. "We are finding that a lot of the plants that were formerly used for landscaping and bioengineering are now having major negative impacts to the natural ecosystems both on and off the installation," Dunn said. "So by using more native species in future landscaping projects, we hope to protect natural ecosystems."

Photo by Carucha Meuse

SEARCH AND RESCUE— Natural Resources Division chief Danny Dunn and staff ecologist Gabby Ehinger search for Price's potato bean plants, a threatened species being protected at Redstone Arsenal.